What are these microbes doing in my filter?

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Biological drinking water treatment is undergoing a renaissance in the United States, with increased interest in the systematic study of biofiltration. Drinking water biofiltration processes have moved from *de facto* to deliberate, with careful filter media selection, nutrient and trace metal supplementation, oxidant amendment, and bioaugmentation of key microorganisms, to achieve improvements in water quality. This talk will give a tour of the complex bacterial communities present in drinking-water biofilters and some of the functions that they carry out. Special attention will be given to the production of extracellular polymeric substances (EPS) under phosphorus-limited conditions and its impact on headloss accumulation and backwash frequency.

BIOGRAPHY

Mary Jo Kirisits is an associate professor and the Fluor Centennial Teaching Fellow in the Environmental and Water Resources Engineering program at The University of Texas (UT) at Austin. She completed her BS degree in Civil Engineering at the State University of New York at Buffalo and her MS and PhD degrees in Environmental Engineering at the University of Illinois at Urbana-Champaign. After concluding a postdoctoral appointment at Northwestern University in the Department of Civil and Environmental Engineering, she joined the faculty at UT. Her research interests include drinking water biofiltration, opportunistic human pathogens in drinking water, and the impact of nanomaterials on microorganisms.